

## 8.17 Water Quality

.1 Purpose. The purpose of this ordinance is to establish storm water management requirements and controls to prevent surface water quality degradation to the extent practicable in the streams and lakes within the Town Limits and Extraterritorial Jurisdiction of Huntersville and to protect and safeguard the general health, safety, and welfare of Huntersville's residents. This ordinance seeks to meet this purpose by fulfilling the following objectives:

- a) Minimize increases in storm water runoff from development or redevelopment in order to reduce flooding, siltation and stream bank erosion, and maintain the integrity of stream channels;
- b) Minimize increases in non-point source pollution caused by storm water runoff from development or redevelopment that would otherwise degrade local water quality;
- c) Minimize the total volume of surface runoff that flows from developed sites in order to replicate pre-development hydrology to the maximum extent practicable;
- d) *Reduce storm water runoff rates and volumes, soil erosion and non-point source pollution, to the extent practicable, through storm water management controls, improved site design or best management practices (BMP's) and to ensure that these management controls are properly maintained and pose no threat to public health or safety; and*
- e) *Meet the requirements of the National Pollution Discharge Elimination System (NPDES) Storm Water Permit and other requirements as established by the Clean Water Act.*

*This ordinance and the Huntersville Water Quality Design Manual require the use of Low Impact Development (LID) BMPs that utilize infiltration, evaporation, retention and detention as well as biological and physical processes to more closely replicate pre-development hydrology characteristics and reduce negative water quality impacts.*

.2 Applicability. This ordinance shall apply to all of the land located within the Town Limits and Extraterritorial Jurisdiction of Huntersville. The effective date of this ordinance is June 30, 2007. This ordinance governs the development and use of all land and structures. No building, structure, or land shall be used, occupied or altered, and no building, structure, or part thereof shall be erected, constructed, reconstructed, moved, enlarged, or structurally altered, unless in conformity with all the provisions of this ordinance and all other applicable regulations, except as otherwise provided by this ordinance.

.3 Exceptions to Applicability.

a) All properties shall be subject to this ordinance except those properties which, as of the effective date of June 30, 2007, fit into one of the following categories:

- (1) Have been issued a Certificate of Building Code Compliance;
- (2) Have a valid building permit;
- (3) Are included on a valid preliminary subdivision plan and/or a valid sketch plan; or
- (4) Are included in a complete conditional rezoning application and subdivision sketch plan submitted by May 1, 2007.

b) Redevelopment of non-single family homes that disturbs less than 20,000 square feet, does not decrease existing storm water controls, is not part of a larger common plan of development or sale, and renovation and/or construction costs do not exceed 100% of the tax value of the property.

c) Residential development activity that disturbs less than one acre of land and is not part of a larger common plan of development or sale, including new development, redevelopment or expansions, is not subject to the provisions of this ordinance.

d) Non-residential development activity that disturbs less than 1/2 acre of land and is not part of a

larger common plan of development or sale, including new development, redevelopment or expansions, is not subject to the provisions of this ordinance.

.4 No Development or Redevelopment Until Compliance and Permit. No Development or redevelopment shall occur except in compliance with the provisions of this ordinance or unless exempted. No development for which a permit is required pursuant to this ordinance shall occur except in compliance with the provisions, conditions, and limitations of the permit.

.5 Map. The provisions of this ordinance shall apply within the areas designated on the map titled "Post-Construction Ordinance Map of the Town of Huntersville, North Carolina" (hereafter referred to as the "Post-Construction Ordinance Map"), which is adopted simultaneously herewith. The Post-Construction Ordinance Map and all explanatory matter contained thereon accompanies and is hereby made a part of this ordinance. The Post-Construction Ordinance Map shall be kept on file by the Storm Water Administrator or designee (hereinafter referred to as the "Storm Water Administrator") and shall be updated to take into account changes in the land area covered by this ordinance and the geographic location of all structural BMPs permitted under this ordinance. In the event of a dispute, the applicability of this ordinance to a particular area of land or BMP shall be determined by appeal through the Storm Water Administrator.

.6 Definitions. For the purposes of this Ordinance, the following words and phrases shall be defined as specified below:

Administrative Manual. A manual developed by the Storm Water Administrator and distributed to the public to provide information for the effective administration of this ordinance, including but not limited to application requirements, submission schedule, fee schedule, operation and maintenance agreements, criteria for recordation of documents, inspection report forms, requirements for submittal of bonds, and a copy of this ordinance.

Best Management Practices (BMP's). A structural or nonstructural management based practice used singularly or in combination to reduce non-point source input to receiving waters in order to achieve water quality protection goals.

- Non-structural BMP's. - Non-engineering methods to control the amount of non-point source pollution. These may include land-use controls and vegetated buffers.

- Structural BMP's. - Engineered structures that are designed to reduce the delivery of pollutants from their source or to divert contaminants away from a waterbody.

Built-Upon Area (BUA). That portion of a development project that is covered by impervious or partially impervious surface including, but not limited to, buildings; pavement and gravel areas such as roads, parking lots, and paths; and recreation facilities such as tennis courts. "Built-upon area" does not include a wooden slatted deck or the water area of a swimming pool. The specific methodology for calculating BUA is contained in the Charlotte-Mecklenburg BMP Design Manual.

Charlotte-Mecklenburg BMP Design Manual. A document that contains design for BMPs. The Huntersville Water Quality Design Manual and/or this ordinance indicate the designs from the Charlotte-Mecklenburg BMP Design Manual that are approved for use in the Town of Huntersville for compliance with this ordinance. The Charlotte-Mecklenburg BMP Design Manual shall be approved for use in the Town of Huntersville by the North Carolina Department of Environment and Natural Resources and shall be at least as stringent as the storm water design manual approved for use in Phase II jurisdictions by the Department for the proper implementation of the requirements of the

federal Phase II storm water program. All references herein to the Charlotte-Mecklenburg BMP Design Manual are to the latest published edition or revision.

Conventional BMPs. Storm water treatment devices that are not LID BMPs as defined below in "Definitions."

Detain. To store and slowly release storm water runoff following precipitation by means of a surface depression or tank and an outlet structure. Detention structures are commonly used for pollutant removal, water storage, and peak flow reduction.

Huntersville Water Quality Design Manual. The document that contains the approved BMP designs and other information necessary for compliance with this ordinance. The Huntersville Water Quality Design Manual shall be approved for use in the Town of Huntersville by the North Carolina Department of Environment and Natural Resources and shall be at least as stringent as the storm water design manual approved for use in Phase II jurisdictions by the Department for the proper implementation of the requirements of the federal Phase II storm water program. All references herein to the Huntersville Water Quality Design Manual are to the latest published edition or revision.

Hydrologic Abstractions. Physical processes of interception of rainfall or overland storm water flow by vegetation, evaporation from land surfaces and upper soil layers, transpiration by plants, infiltration of water into soil surfaces, and storage of water in surface depressions.

Low Impact Development (LID) Approach. A technology-based system for managing urban storm water runoff that combines a hydrologically functional site design with pollution prevention measures to compensate for land development impacts on hydrology and water quality. To be effective, the LID approach must be applied to every phase of site planning, design, development, and post-construction control for the purpose of mimicking predevelopment site hydrology by storing, infiltrating, evaporating and detaining storm water runoff. Examples of the LID Approach include reducing impervious surfaces, managing storm water closer to the source and avoiding large centralized management devices, phased grading, and vegetated conveyances instead of storm drain piping.

Low Impact Development (LID) BMPs. Decentralized, structural storm water treatment devices that utilize infiltration, evaporation, retention and detention as well as biological and physical processes to more closely replicate pre-development hydrology characteristics and reduce negative water quality impacts. Examples of LID BMPs include bio retention systems, sand filters, and vegetated filter strips.

Mecklenburg County Land Use and Environmental Services Agency. The department or division of Mecklenburg County government (regardless of the title given to it by Mecklenburg County) which has responsibility for storm water and water quality matters, acting as the agent of the Town of Huntersville for various purposes in connection with the enforcement of this ordinance.

National Pollution Discharge Elimination System (NPDES) Permit. A permit issued pursuant to the federal Clean Water Act for the purpose of controlling discharges of pollutants to surface waters and protecting water quality. In North Carolina, NPDES Permits are issued by the N.C. Department of Environment and Natural Resources.

Non-Point Source (NPS) Pollution. Forms of pollution caused by sediment, nutrients, organic and toxic substances originating from land use activities and carried to lakes and streams by surface runoff.

Retain. To capture and hold storm water runoff following precipitation by means of surface depression allowing the water to infiltrate into the soil, thus reducing the hydrologic and pollution impacts downstream. Retention structures are commonly used for pollutant removal, water storage,

and peak flow reduction.

Storm Water Administrator. The Mecklenburg County Water Quality Program Manager that has been designated by the Town of Huntersville Board of Commissioners to administer and enforce this ordinance.

Storm Water Management Permit. A permit required for all development and redevelopment unless exempt pursuant to this ordinance, which demonstrates compliance with this ordinance.

Total Suspended Solids (TSS). Total suspended matter in water, which is commonly expressed as a concentration in terms of milligrams per liter (mg/l) or parts per million (ppm).

## 7. Interpretation.

### a) Meaning and Intent

All provisions, terms, phrases and expressions contained in this ordinance shall be construed according to the general and specific purposes set forth in [Section 8.17.1](#), Purpose. If a different or more specific meaning is given for a term defined elsewhere in the Town of Huntersville ordinances, the meaning and application of the term in this ordinance shall control for purposes of application of this ordinance.

### b). Text Controls in Event of Conflict

In the event of a conflict or inconsistency between the text of this ordinance and any heading, caption, figure, illustration, table or map, the text shall control.

### c) Authority for Interpretation

The Storm Water Administrator has authority to interpret this ordinance. Any person may request an interpretation by submitting a written request to the Storm Water Administrator who shall respond in writing within 30 days. The Storm Water Administrator who shall keep on file a record of all written interpretations of this ordinance.

### d) References to Statutes, Regulations, and Documents

Whenever reference is made to a resolution, ordinance, statute, regulation, manual (including the Design and Administrative Manuals), or document, it shall be construed as a reference to the most recent edition of such that has been finalized and published with due provision for notice and comment, unless otherwise specifically stated.

### e) Computation of Time

The time in which an act is to be done shall be computed by excluding the first day and including the last day. If a deadline or required date of action falls on a Saturday, Sunday, or holiday observed by the Town of Huntersville, the deadline is required date of action shall be the next day that is not a Saturday, Sunday or holiday observed by the Town of Huntersville. References to days are working days unless otherwise stated.

### f) Delegation of Authority

Any act authorized by this ordinance to be carried out by the Storm Water Administrator or the Town of Huntersville may be carried out by his or her designee.

### g) Usage

#### (1) Mandatory and Discretionary Terms

The words "shall," "must," and "will," are mandatory in nature, establishing an obligation or duty to comply with the particular provision. The words "may" and "should" are permissive in nature.

#### (2) Conjunctions

Unless the context clearly indicates the contrary, conjunctions shall be interpreted as follows: The word "and" indicates that all connected items, conditions, provisions or events apply. The word "or"

indicates that one or more of the connected items, conditions, provisions or events apply.

### (3) Tense, Plurals, and Gender

Words used in the present tense include the future tense. Words used in the singular number include the plural number and the plural number includes the singular number, unless the context of the particular usage clearly indicates otherwise. Words used in the masculine gender include the feminine gender, and vice versa.

### h) Measurement and Computation

Lot area refers to the amount of horizontal land area contained inside the lot lines of a lot or site.

## .8 Huntersville Water Quality Design Manual.

a. Reference to the Huntersville Water Quality Design Manual. The Storm Water Administrator shall use the policy, criteria, and information, including technical specifications and standards, in the Huntersville Water Quality Design Manual as the basis for decisions about Storm Water Management Permits and about the design, implementation and performance of structural and non-structural storm water BMPs. The Huntersville Water Quality Design Manual includes acceptable BMPs for compliance with ordinance requirements, including the specific design criteria for each BMP. BMPs that are designed and constructed in accordance with these criteria will be presumed to meet the minimum water quality performance standards of this ordinance and the federal Phase II Storm Water Rules. Failure to construct BMPs in accordance with these criteria may subject the violator to a civil penalty as described in this ordinance.

b. Relationship of the Huntersville Water Quality Design Manual to Other Laws and Regulations. If the specifications or guidelines of the Huntersville Water Quality Design Manual are more restrictive or apply a higher standard than other laws or regulations, that fact shall not prevent application of the specifications or guidelines in the Huntersville Water Quality Design Manual.

c. Changes to Standards and Specifications. Standards, specifications, guidelines, policies, criteria, or other information in the Huntersville Water Quality Design Manual in affect at the time of acceptance of a complete application shall control and shall be utilized in reviewing the application and in implementing this ordinance with regard to the application.

d. Amendments to the Huntersville Water Quality Design Manual. Subject to Huntersville Planning Director approval, the Huntersville Water Quality Design Manual may be updated and expanded from time to time, based on advancements in technology and engineering, improved knowledge of local conditions, or local monitoring or maintenance experience. Prior to amending or updating the Huntersville Water Quality Design Manual, proposed changes shall be generally publicized and made available for review, and an opportunity for comment by interested persons shall be provided.

## .9 Relationships to Other Laws, Regulations and Private Agreements

a) Conflict of Laws. This ordinance is not intended to modify or repeal any other ordinance, rule, regulation or other provision of law. The requirements of this ordinance are in addition to the requirements of any other ordinance, rule, regulation or other provision of law, and where any provision of this ordinance imposes restrictions different from those imposed by any other ordinance, rule, regulation or other provision of law, whichever provision is more restrictive or imposes higher protective standards for human or environmental health, safety, and welfare, shall control.

b) Private Agreements. This ordinance is not intended to revoke or repeal any easement, covenant, or other private agreement. However, where the regulations of this ordinance are more restrictive or impose higher standards or requirements than such easement, covenant, or other private agreement, then the requirements of this ordinance shall govern. Nothing in this ordinance shall modify or repeal any private covenant or deed restriction, but such covenant or restriction shall not legitimize any failure to comply with this ordinance. In no case shall the Town of Huntersville be obligated to enforce the provisions of any easements, covenants, or agreements between private parties.

.10 Severability. If the provisions of any section, subsection, paragraph, subdivision or clause of this ordinance shall be adjudged invalid by a court of competent jurisdiction, such judgment shall not affect or invalidate the remainder of any section, subsection, paragraph, subdivision or clause of this ordinance.

.11 Effective Date and Transitional Provisions

a) Effective Date. This ordinance shall take effect on June 30, 2007.

b) Violations Continue. Any violation of the provisions of this ordinance existing as of the effective date of this ordinance shall continue to be a violation under this ordinance and be subject to penalties and enforcement unless the use, development, constructions, or other activity complies with the provisions of this ordinance.

.12 Performance Criteria. All development and redevelopment to which this ordinance applies shall comply with all the Performance Criteria of this section unless mitigation requirements are satisfied as described in Section 8.17.15 of this ordinance. The Huntersville Water Quality Design Manual contain a list of BMPs approved for meeting these criteria. The specific design criteria for these BMPs are contained in the Huntersville Water Quality Design Manual as well as other State and/or local design manuals as specifically referenced in Huntersville Water Quality Design Manual.

a) Performance Criteria for Low Density Projects. Any project is considered low density when said project has less than or equal to 12% built upon area as determined by the methodology established in the Charlotte-Mecklenburg BMP Design Manual. Such low density projects shall comply with each of the following standards.

(1) Vegetated Conveyances. Storm water runoff from the development shall be transported from the development by vegetated conveyances to the maximum extent practicable.

(2) Built-Upon Area Setbacks. All built-upon area for development and redevelopment subject to the requirements of this ordinance shall be at a minimum of 30 feet landward of all perennial and intermittent surface waters. This built-upon area setback can be located within the water quality buffer area. Surface water shall be deemed present if the feature is approximately shown on either the most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture or the most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS). An exception to this requirement shall be granted if one or more of the following is satisfied and documented:

(a) Based on an on-site determination by the Storm Water Administrator, surface waters are not present on the site. When a landowner or other affected party

believes that the maps have inaccurately depicted surface waters, he or she shall consult the Storm Water Administrator. Upon request, the Storm Water Administrator shall make on-site determinations. Surface waters that appear on the maps shall not be subject to this ordinance if this on-site determination shows that they fall into one of the following categories:

- - Ditches and manmade conveyances other than modified natural streams unless constructed for navigation or boat access.
- - Manmade ponds and lakes located outside natural drainage ways.
- - Ephemeral (storm water) streams.

(b) Based on a Variance issued pursuant to Section 11.3 of this ordinance, unnecessary hardships would result from the strict application of this requirement.

(c) Based on a determination by the Storm Water Administrator, a lack of practical alternatives exists for accomplishing the basic purpose of the project in a manner that would avoid or result in less adverse impact to surface waters considering the potential for a reduction in size, configuration, or density and all alternative designs.

(3) Stream Buffers. The S.W.I.M Stream Buffer requirements as described in Section 8.25 of this ordinance shall apply to low density projects.

b) Performance Criteria for High Density Projects. Any project is considered high density when said project has greater than 12% built upon area as determined by the methodology established in the Charlotte-Mecklenburg BMP Design Manual. Such high density projects shall comply with each of the following standards:

(1) Built-Upon Area Setbacks. All built-upon area for development and redevelopment subject to the requirements of this ordinance shall be at a minimum of 30 feet landward of all perennial and intermittent surface waters. This built-upon area setback can be located within the water quality buffer area. Surface water shall be deemed present if the feature is approximately shown on either the most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture or the most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS). An exception to this requirement shall be granted if one or more of the following is satisfied and documented:

(a) Based on an on-site determination by the Storm Water Administrator, surface waters are not present on the site. When a landowner or other affected party believes that the maps have inaccurately depicted surface waters, he or she shall consult the Storm Water Administrator. Upon request, the Storm Water Administrator shall make on-site determinations. Surface waters that appear on the maps shall not be subject to this ordinance if this on-site determination shows that they fall into one of the following categories:

- - Ditches and manmade conveyances other than modified natural streams unless constructed for navigation or boat access.
- - Manmade ponds and lakes located outside natural drainage ways.
- - Ephemeral (storm water) streams

(b) Based on a Variance issued pursuant to Section 11.3 of this ordinance, unnecessary hardships would result from the strict application of this requirement.

(c) Based on a determination by the Storm Water Administrator, a lack of practical alternatives exists for accomplishing the basic propose of the project in a manner that would avoid or result in less adverse impact to surface waters considering the potential for a reduction in size, configuration, or density and all alternative designs.

(2) Stream Buffers. The S.W.I.M. Stream Buffer requirements as described in Section 8.25 of this ordinance shall apply to high density projects.

(3) Storm Water Quality Treatment Volume. Storm water quality treatment systems shall treat the runoff generated from the first inch of rainfall.

(4) Storm Water Quality Treatment Standard. All BMPs used to meet these Performance Criteria shall be designed to achieve an average annual 85% Total Suspended Solids (TSS) removal for the developed area of the site. LID BMPs or a combination of LID and Conventional BMPs as described in the Huntersville Water Quality Design Manual shall be used to meet these water quality Performance Criteria. If a combination of LID and Conventional BMPs is used, then at a minimum the first 50% of the runoff from the one (1) inch storm event must be treated using LID BMPs. The remaining percentage shall be treated using Conventional BMPs capable of achieving the above described pollutant removal efficiency. No one bio retention BMP shall exceed 5,000 square feet of soil media surface area.

(5) Storm Water Treatment System Design. General engineering design criteria for all projects shall be in accordance with 15A NCAC 2H .1008(c), as explained in the Huntersville Water Quality Design Manual.

(6) Storm Water Volume Control. LID BMPs or a combination of LID and Conventional BMPs shall be used to control and treat the increase in storm water runoff volume associated with post-construction conditions as compared with pre-construction (existing) conditions for the 2-year frequency, 24-hour duration storm event in the Rural and Transitional Zoning Districts. For all other Zoning Districts, LID BMPs or a combination of LID and Conventional BMPs shall be used to control and treat the increase in storm water runoff volume associated with post-construction conditions as compared with pre-construction (existing) conditions for the 1-year frequency, 24-hour duration storm event. Where any storm water BMP employs the use of a temporary water quality storage pool as a part of its treatment system, the drawdown time shall be a minimum of 48 hours and a maximum of 120 hours.

(7) Storm Water Volume Peak Control. The peak storm water runoff release rates leaving the site during post-construction conditions shall be equal to or less than the pre-development peak storm water runoff release rates for the 2-year frequency, 24-hour duration storm event and 10-year frequency, 24-hour duration storm event. The emergency overflow and outlet works for any pond or wetland constructed as storm water BMP shall be capable of safely passing a discharge with a minimum recurrence frequency of 50 years. For detention basins, the temporary storage capacity shall be restored within 72 hours. Requirements of the Dam Safety Act shall be met when applicable.



.13 Low Impact Development (LID) Approach. The Low Impact Development (LID) Approach is a technology-based system for managing urban storm water runoff that combines a hydrological functional site design with pollution prevention measures to compensate for land development impacts on hydrology and water quality. To be effective, the LID Approach must be applied to every phase of site planning, design, development and post-construction control for the purpose of mimicking predevelopment site hydrology by storing, infiltrating, evaporating and detaining storm water runoff. Examples of the LID Approach include reducing impervious surfaces, managing storm water closer to the source and avoiding large centralized management devices, phased grading, and vegetated conveyances instead of storm drain piping. The principal goal of the LID Approach is to ensure maximum protection of the ecological integrity of the receiving waters by maintaining the watershed's hydrologic regime. In contrast, the conventional approach to storm water management seeks to alter the watershed's hydrologic regime by conveying runoff into a piping system and centralized storm water management devices to quickly and efficiently remove storm water from the development site. Most development practices follow this conventional approach to storm water management. The use of the LID Approach is not required by this ordinance but is strongly encouraged. One of the post-construction components of the LID Approach is the LID BMP, which is a single structural device that utilizes the LID principles of infiltration, evaporation, retention and detention as well as biological and physical processes to treat storm water runoff. The use of LID BMPs is required by this ordinance unless mitigation practices are approved and implemented. The purpose of this Section of the ordinance is to encourage the use of the LID Approach along with LID BMPs, which is most effective and efficient combination for managing storm water runoff and facilitating compliance with the Purpose of this ordinance as described in Section 8.17.1. The LID Approach and LID BMPs are further defined and explained in the Huntersville Water Quality Design Manual.

.14 Standards for Storm Water Control Measures.

a) Evaluation According to Contents of Huntersville Water Quality Design Manual. All storm water BMPs required under this ordinance shall be evaluated by the Storm Water Administrator according to the policies, criteria, and information, including technical specifications, standards and the specific design criteria for each BMP contained in the Huntersville Water Quality Design Manual. The Storm Water Administrator shall determine whether these measures will be adequate to meet the requirements of this ordinance.

b) Determination of Adequacy. BMPs that are designed, constructed, and maintained in accordance with the criteria and specifications in the Huntersville Water Quality Design Manual will be presumed to meet the minimum water quality and quantity performance standards of this ordinance. Whenever an applicant proposes to utilize a practice or practices not designed and constructed in accordance with the criteria and specifications in the Huntersville Water Quality Design Manual, the applicant shall have the burden of demonstrating that the practice(s) will satisfy the minimum water quality and quantity performance standards of this ordinance before it can be approved for use. The Storm Water Administrator may require the applicant to provide such documentation, calculations, and examples as necessary for the Storm Water Administrator to determine whether such an affirmative showing is made.

c) Submittal of Digital Records. Upon submittal of as-built surveys, the location of storm drainage pipes, inlets and outlets as well as the location of all structural BMPs must be delivered to the Storm Water Administrator in the digital format specified in the Administrative Manual.

.15 LID Mitigation.

a) General Description:

(1) Mitigation Allowed. Developments with greater than or equal to 50% built-upon area based on lot size shall be allowed to forgo the use of LID BMPs on the development site for compliance with this ordinance provided:

(a) A mitigation option is approved and successfully implemented for the development;

(b) Conventional BMPs are designed, constructed, and maintained on the development site to achieve an average annual 85% Total Suspended Solids (TSS) removal for the developed area of the site in accordance with the criteria and specifications in the Huntersville Water Quality Design Manual; and

(c) The development site achieves full compliance with the Performance Criteria contained in Section 8.17.12(b) 1, 2, 3, 5, 6, and 7 of this ordinance.

(2) LID Mitigation Options. There are two (2) LID mitigation options available to developments greater than or equal to 50% built-upon area, including off-site and buy-down mitigation. Both off-site and buy-down mitigation shall result in the construction of retrofit projects in the same river basin in the Town of Huntersville (Catawba or Yadkin) as the development site.

b) Criteria for Off-Site Mitigation Option

(1) Off-Site LID BMP Construction. The owner or designee of the development site shall satisfy the off-site mitigation option by constructing a BMP retrofit project off-site and in the same river basin in the Town of Huntersville (Catawba or Yadkin) as the development site. The project shall be designed and constructed to achieve a net mass removal of pollutants greater than or equal to the pollutant load associated with the difference between the pollutant removal efficiencies for LID versus Conventional BMPs at the development site treating runoff from the first one (1) inch of rainfall. The Huntersville Water Quality Design Manual shall contain the criteria for satisfying this requirement.

(2) Off-Site Mitigation Application. The Storm Water Administrator shall receive, review, approve, disapprove or approve with conditions an "Application for Off-Site Mitigation." The Storm Water Administrator shall design this application to include all pertinent information. This application shall be submitted with the Concept Plan Application. The Huntersville Water Quality Design Manual shall contain information regarding the proper completion and submittal of this application.

(3) Criteria for Approval of Off-Site Mitigation. The criteria for approval of off-site mitigation by the Storm Water Administrator are as follows:

(a) BMP(s) shall be designed, constructed, and maintained in accordance with the criteria and specifications in the Huntersville Water Quality Design Manual.

(b) BMP(s) shall be sized for the corresponding watershed area according to the approved design standards in the Huntersville Water Quality Design Manual.

(c) BMP(s) shall be inspected by the Storm Water Administrator and found to be in compliance with all approved plans and specifications prior to the release of occupancy permits for the development site.

(d) All off-site mitigation BMPs shall be subject to the maintenance requirements as well as installation and maintenance performance securities specified in this ordinance and the Administrative Manual.

c) Criteria for Buy-Down Mitigation Option

(1) Payment of Mitigation Fee. Buy-Down mitigation shall be satisfied by payment to the Town of Huntersville of a fee established by the Storm Water Administrator to cover the cost for installation by the Town or its designee of a mitigation project in the same river basin (Catawba or Yadkin) as the development site. The project shall be designed and constructed to achieve a net mass removal of pollutants greater than or equal to the pollutant load associated with the difference between the pollutant removal efficiencies for LID versus Conventional BMPs at the development site treating runoff from the first one (1) inch of rainfall. The Huntersville Water Quality Design Manual shall contain the criteria for satisfying these requirements.

(2) Buy-Down Mitigation Application. The Storm Water Administrator shall receive, review, approve, disapprove or approve with conditions an "Application for Buy-Down Mitigation." The Storm Water Administrator shall design this application to include all pertinent information. This application shall be submitted with the Concept Plan Application. The Huntersville Water Quality Design Manual shall contain information regarding the proper completion and submittal of this application.

(3) Criteria for Approval of Buy-Down Mitigation. The criteria for approval of buy-down mitigation by the Storm Water Administrator are as follows

(a) The buy-down option shall not be approved by the Storm Water Administrator unless projects and/or properties are available for mitigation at the time the "Application for Buy-Down Mitigation" is received.

(b) There is no time constraint for the Town of Huntersville to spend mitigation money; however, the Town of Huntersville shall strive to spend buy-down monies in a timely and efficient manner such that a net improvement in water quality results.

(c) All projects constructed by the Town of Huntersville as part of this mitigation option shall be maintained by the Town of Huntersville or its designee into perpetuity.

.16 Administration and Procedures.

a) Storm Water Administrator

(1) Designation. The Mecklenburg County Water Quality Program Manager has been designated as the Storm Water Administrator by the Town of Huntersville for the purpose of administering and enforcing this ordinance. Any act authorized by this ordinance to be carried out by the Storm Water Administrator of the Town of Huntersville may be carried out by his or her designee

(2) Powers and Duties. In addition to the powers and duties that may be conferred by other provisions of other laws, the Storm Water Administrator shall have the following powers and duties under this ordinance.

(a) To review and approve or disapprove applications submitted pursuant to this ordinance.

(b) To make determinations and render interpretations of this ordinance.

(c) To establish application requirements and schedules for submittal and review of applications and appeals.

(d) To enforce this ordinance in accordance with its enforcement provisions.

(e) To maintain records, maps, and official materials as relate to the adoption, amendment, enforcement, or administration of this ordinance.

(f) To provide expertise and technical assistance upon request to the Huntersville Town Board.

(g) To designate appropriate other person(s) who shall carry out the powers and duties of the Storm Water Administrator.

(h) To provide information and recommendations relative to variances and information as requested by the Town of Huntersville in response to appeals.

(i) To take any other action necessary to administer the provisions of this ordinance.

b) Administrative Manual. For applications required under this ordinance, the Storm Water Administrator shall compile into an Administrative Manual the application requirements, submittal checklist, submission schedule, fee schedule, operation and maintenance agreements, a copy of this ordinance, and other information and materials necessary for the effective administration of this ordinance. This Administrative Manual shall be made available to the public.

c) Review Procedures

(1) Permit Required. A Storm Water Management Permit is required for all development and redevelopment unless exempt pursuant to this ordinance. A permit may only be issued subsequent to a properly submitted, reviewed and approved permit application, pursuant to this Section. The content and form of the permit shall be established by the Storm Water Administrator.

(2) Effect of Permit. A Storm Water Management Permit shall govern the design, installation, and construction of storm water management and control practices on the site, including structural BMPs and elements of site design for storm water management other than structural BMPs. The permit is intended to provide a mechanism for the review, approval, and inspection of the approach to be used for the management and control of storm water for the development or redevelopment site consistent with the requirements of this ordinance. Compliance after project construction is assured by the maintenance provision of this ordinance.

(3) Authority to File Applications. All applications required pursuant to this ordinance shall be submitted to the Storm Water Administrator by the land owner or the land owner's duly authorized agent or anyone having interest in the property by reason of a written contract with the owner.

(4) Establishment of Application Requirements, Schedules, and Fees

(a) The Storm Water Administrator shall establish requirements for the content and form of all applications and shall amend and update those requirements from time to time. Two (2) applications are required for submittal, including the Concept Plan Application and Storm Water Management Permit Application.

(b) The Storm Water Administrator shall establish a submission schedule for applications. The schedule shall establish deadlines by which complete applications must be submitted for the purpose of ensuring that there is adequate time to review applications, and that the various stages in the review process are accommodated.

(c) The Town of Huntersville shall establish permit review fees as well as policies regarding refund of any fees upon withdrawal of an application, and may amend and update the fees and policies from time to time.

(5) Consultations. An applicant may request consultation(s) on a Concept Plan Application for the post-construction storm water management system to be utilized in the proposed development project. This consultation meeting(s) should take place at the time of the preliminary plan of the subdivision or other early step in the development process. The purpose of this meeting(s) is to discuss the post-construction storm water management measures necessary for the proposed project, as well as to discuss and assess constraints, opportunities and potential approaches to storm water management designs before formal site design engineering is commenced.

(6) Submittal Applications

(a) A Concept Plan. Application shall be submitted to the Storm Water Administrator for review prior to the submittal of the Storm Water Management Permit Application. This Concept Plan Application shall include the information necessary to evaluate the proposed development site for compliance with Performance Criteria as detailed in the Huntersville Water Quality Design Manual.

(b) A Storm Water Management Permit Application shall be submitted to the Storm Water Administrator for review following the approval of the Concept Plan Application. This Storm Water Management Permit Application shall detail how

post-construction storm water runoff will be controlled and managed and how the proposed project will meet the requirements of this ordinance. The application shall also include the design of all storm water facilities and practices, supporting computations, drawings, soil analyses, calculations for each BMP, site hydrology calculations, and other information sufficient to describe the manner, location, and type of measures for managing storm water from the development in compliance with this ordinance. All design plans submitted with the application shall be prepared by a registered North Carolina professional engineer or landscape architect. The engineer or landscape architect shall perform services only in their area of competence, and shall verify that the design of all storm water management facilities and practices meets the submittal requirements for complete applications, that the designs and plans are sufficient to comply with applicable standards and policies found in the **Huntersville Water Quality Design Manual**, and that the designs and plans ensure compliance with this ordinance. The submittal shall include all of the information required in the submittal checklist established by the Storm Water Administrator. Incomplete submittals shall be treated pursuant to Section 8.17.16(c) (7).

(7) Submittal of Complete Application. Applications shall be submitted to the Storm Water Administrator pursuant to the application submittal schedule in the form established by the Storm Water Administrator, along with the appropriate fee established pursuant to this Section. An application shall be considered as timely submitted only when it contains all elements of a complete application pursuant to this ordinance, along with the appropriate fee. If the Storm Water Administrator finds that an application is incomplete, the applicant shall be notified of the deficient elements and shall be provided with an opportunity to submit a complete application. However, the submittal of an incomplete application shall not suffice to meet a deadline contained in the submission schedule established above.

(8) Application Review. Within 20 working days after a complete application is submitted, the Storm Water Administrator shall review the application and determine whether the application complies with the standards of this ordinance

(a) If the Storm Water Administrator finds that the application complies with the standards of this ordinance, the Storm Water Administrator shall approve the application and issue a Storm Water Management Permit to the applicant. The Storm Water Administrator may impose conditions of approval as needed to ensure compliance with this ordinance. The conditions shall be included in the permit as part of the approval.

(b) If the Storm Water Administrator finds that the application fails to comply with the standards of this ordinance, the Storm Water Administrator shall notify the applicant and shall indicate how the application fails to comply. The applicant shall have an opportunity to submit a revised application.

(c) A complete revised application shall be reviewed by the Storm Water Administrator within 15 working days after its re-submittal and shall be approved, approved with conditions or disapproved. If a revised application is not re-submitted within sixty (60) calendar days from the date the applicant was notified, the application shall be considered withdrawn, and a new submittal for the same or substantially the same project shall be required along with the appropriate fee.

.17 As-Built Surveys and Final Approval. The applicant shall certify that the completed project is in accordance with the approved plans and designs, and shall submit actual "as-built" surveys for all storm water management facilities or practices after final construction is completed. Failure to provide approved as-built surveys within the time frame specified by the Storm Water Administrator may result in assessment of penalties. At the discretion of the Storm Water Administrator, performance securities or bonds may be required for storm water management facilities or practices until as-built surveys are approved.

As-built surveys shall show the final design specifications for all storm water management facilities and practices and the field location, size, depth, and planted vegetation of all measures, controls, and devices, as installed. The designer of the storm water management measures and plans shall certify, under seal, that the as-built storm water measures, controls, and devices are in compliance with the approved plans and designs and with the requirements of this ordinance. The exact boundary of all storm water management measures shall be shown on final plats prepared by a registered surveyor. Further, final plats shall contain the following statement: "This lot contains a storm water management structure that must be maintained in accordance with the recorded Maintenance Covenant as specified in the Huntersville Zoning Ordinance."

Final as-built surveys and a final inspection and approval by the Storm Water Administrator are required before a project is determined to be in compliance with this ordinance and before performance securities shall be released. At the discretion of the Storm Water Administrator, certificates of occupancy may be withheld pending receipt of as-built surveys and the completion of a final inspection and approval of a project.

Upon submittal of as-built surveys, the location of storm drainage pipes, inlets and outlets as well as the location of all BMPs must be delivered to the Storm Water Administrator in the digital format specified in the Administrative Manual.

#### .18 Approvals

a) Effect of Approval. Approval authorizes the applicant to go forward with only the specific plans and activity authorized in the permit. The approval shall not be construed to exempt the applicant from obtaining other applicable approvals from local, state, and federal authorities

##### (1) Time Limit/Expiration

A Storm Water Management Permit and accompanying plan approved under the provisions of this ordinance shall remain valid for a period of three (3) years from the date of approval. If no work on the site in furtherance of the plan has commenced within the three-year period, the permit and plan approval will become null and void and a new application will be required to develop the site. If work on the site in furtherance of the plan has commenced that involves any utility installations or street improvements except grading, the permit and plan shall remain valid and in force and the project may be completed in accordance with the approved plan

#### .19 Incentives.

a) Purpose. The purpose of this Section is to set forth incentives to offset restrictions that LID may have on the development of certain sites.

b) Setbacks. In order to accommodate water quality BMPs, required setbacks, side yards and rear yards in the Rural and Transitional Zoning Districts may be reduced up to 25%. The reductions may not compromise public safety such as the site distance triangles as defined by this Zoning Ordinance. It also must not compromise buffer widths or the 30-foot setback described in Section 8.17.12 of this ordinance.

c) Sidewalks. To reduce impervious cover and promote LID, sidewalks on one side of the street may be waived in the Rural Zoning District.

d) Required Plant Reduction and Substitution. In order to accommodate water quality BMPs, the number of planted trees may be reduced in buffer yards by 10%, 50% of the required trees may be 1.5 inches in caliper, and all shrubs may be 24 inches in height.

e) Encroachments. Water quality BMPs may encroach into a required buffer yard as long as the encroachment does not disturb existing vegetation. Minor understory may be disturbed in order to accommodate water quality structures. Trees and shrubs shall be placed to maximize screening where the encroachment takes place. If the encroachment runs parallel to the buffer, the width of the buffer shall be increased by the amount of the encroachment

.20 Appeals and Variances. An appeal to reverse or modify the order, decision, determination, or interpretation of the Storm Water Administrator or any other designated administrative officer as well as a request for variance from any of the requirements contained in this ordinance shall comply with the procedures and standards of Section 11.3 of this ordinance.

.21 Posting of Financial Security. Approval of a Storm Water Management Permit Application shall be subject to the owner filing a surety bond or letter of credit or making other financial arrangements in favor of Mecklenburg County as agent for the Town of Huntersville acceptable to the Mecklenburg County Land Use and Environmental Services Agency guaranteeing the installation and maintenance of required BMPs until the issuance of certificates of occupancy for seventy-five percent (75%) of all construction which might reasonably be anticipated to be built within the area which drains into the BMP, allowing credit for improvements completed prior to the submission of the final plat. At such time that this level of occupancy is achieved, written notice thereof shall be submitted by the owner to the Mecklenburg County Land Use and Environmental Services Agency. The owner shall verify the adequacy of the Maintenance Covenant for the BMPs including the necessary financing to support the proposed maintenance practices. The owner shall also provide professional engineer certification that the BMP is designed and constructed in accordance with approved plans and specifications. The Mecklenburg County Land Use and Environmental Services Agency will inspect the structural BMP and verify the effectiveness of the Maintenance Covenant and, if both are found to be satisfactory, the Mecklenburg County Land Use and Environmental Services Agency will notify the owner in writing within 30 days of the date of notice regarding approval of the BMP. Following the issuance of this written approval, the owner can request the release of the surety bond, letter of credit or other financial arrangements at which time the maintenance responsibilities for the BMPs shall revert to the Homeowners Association, property owner or other party responsible for long term maintenance as specified in the Maintenance Covenant. It shall be expressly stated within the restrictive covenants or Property Owners Association documents that it will be the responsibility of the owner or assigns to maintain BMPs until such time as maintenance responsibilities have been transferred to the Homeowners Association Board of Directors, property owner or other party responsible for long term maintenance



of the BMPs. It shall be the sole responsibility of the owner or assigns to correct any deficiencies prior to said transfer of maintenance responsibilities

.22 Maintenance. The owner of each BMP installed pursuant to this ordinance shall maintain and operate it so as to preserve and continue its function for controlling storm water quality and quantity at the degree or amount of function for which the BMP was designed. BMPs shall not be constructed on public land, within public rights-of-way, and/or within public easements without written approval from the public body with ownership/jurisdiction of the subject property. The following requirements shall be met for all BMPs that have been constructed on privately-owned property and not within a public easement.

a) Operation and Maintenance Agreement. Prior to the issuance of an Occupancy Permit for any building within a permitted development served by a BMP, the applicant or owner of the BMP shall establish a formal Operation and Maintenance Agreement approved by the Storm Water Administrator and recorded in the Office of the Register of Deeds in which the owner acknowledges the duty of the owner and all subsequent owners of the property to maintain the BMP in accordance with the terms of the Agreement, including repairing and, if necessary, reconstruction of the BMP. Until the transference of all property, sites, or lots served by the structural BMP, the original owner or applicant shall have primary responsibility for carrying out the provisions of the Operation and Maintenance Agreement. A maintenance plan shall be included as part of the Agreement that shall state the terms, conditions, and schedule of maintenance for the structural BMP as well as describe the mechanism for funding maintenance and repairs. The Operation and Maintenance Agreement shall also specify the Property Owners Association or other party responsible for maintenance of the BMP. A Property Owners Association or similar legal entity shall have the power to compel contributions from residents of a development to cover their proportionate shares of the costs associated with BMP maintenance. At the discretion of the Storm Water Administrator, certificates of occupancy may be withheld pending receipt of an Operation and Maintenance Agreement.

Standard Operation and Maintenance Agreements for BMPs shall be developed by the Storm Water Administrator and made available in the Administrative Manual. The Operation and Maintenance Agreement must be approved by the Storm Water Administrator prior to plan approval, and it shall be referenced on the final plat and shall be recorded by the applicant or owner with the Mecklenburg County Register of Deeds upon final plat approval. A copy of the recorded Operation and Maintenance Agreement shall be given to the Storm Water Administrator within fourteen (14) days following its recordation.

b) Inspection and Maintenance Requirements. All BMPs installed pursuant to the requirements of this ordinance shall be inspected by a qualified professional as designated by the Storm Water Administrator at a minimum of annually within 45 days prior to the anniversary date of the approval of the as-built survey. The purpose of these inspections is to identify maintenance and repair needs and to ensure compliance with the requirements of this ordinance. The person responsible for BMP maintenance shall submit to the Storm Water Administrator a completed inspection report. All inspection reports shall be on forms supplied by the Storm Water Administrator and contained in the Administrative Manual. Any identified maintenance and/or repair needs shall be addressed in a timely manner. The inspection and maintenance requirement may be increased as deemed necessary by the Storm Water Administrator to ensure proper functioning of the BMP and compliance with this ordinance

c) Records of Installation and Maintenance Activities. Parties responsible for the inspection, operation, and maintenance of a BMP shall make records of the installation of all the

maintenance and repairs and shall retain the records for at least five (5) years. Those records shall be made available to the Storm Water Administrator upon request and/or as specifically outlined in the Maintenance Covenant

d) Failure to Maintain Practices. It is unlawful for a property owner to fail to meet the requirements of the Operation and Maintenance Agreement. Any person or association that fails to meet the requirements of the Operation and Maintenance Agreement shall be subject to a civil penalty as described in Section 8.17.25.

e) Maintenance Easement. Every structural BMP installed pursuant to this ordinance shall be made accessible for adequate inspection, maintenance, reconstruction and repair by a maintenance easement. The easement shall be recorded with the Mecklenburg County Register of Deeds Office and its terms shall specify who may make use of the easement and for what purposes.

.23 Deed Recordation and Indications on Plat. The approval of the Storm Water Management Permit shall require an enforceable restriction on property usage that runs with the land, such as plat, recorded deed restrictions or protective covenants, to ensure that future development and redevelopment maintains the site consistent with the approved project plans. Stream buffers as described in Section 8.25, including the delineation of each buffer zone, must be specified on all surveys and record plats. The Operations and Maintenance Agreement pertaining to every structural BMP shall be referenced on the final plat and shall be recorded with the Mecklenburg County Register of Deeds Office upon final plat approval. If no subdivision plat is recorded for the site, then the Operation and Maintenance Agreement shall be recorded with the Mecklenburg County Register of Deeds Office so as to appear in the chain of title of all subsequent purchasers under generally accepted searching principles. A copy of the recorded Operation and Maintenance Agreement shall be provided to the Storm Water Administrator within fourteen (14) days following receipt of the recorded document. A maintenance easement shall be recorded for every structural BMP to allow sufficient access for adequate maintenance. The specific recordation and deed restriction requirements as well as notes to be displayed on final plats and deeds shall be contained in the Administrative Manual

.24 Inspections of BMPs.

a) Inspections. As described in Section 8.17.22(b), the owner of a BMP shall inspect said BMP at a minimum of annually within 45 days prior to the anniversary date of the approval of the as-built survey. Additional inspections may be conducted by the Storm Water Administrator on any reasonable basis, including but not limited to: routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; inspections of drainage basins or areas identified as higher than typical sources of sediment or other contaminants or pollutants; inspections of businesses or industries of a type associated with higher than usual dischargers of contaminants or pollutants or with discharges of a type which are more likely than the typical discharge to cause violations of State or Federal water quality standards or the NPDES Storm Water Permit; and joint inspections with other agencies inspecting under environmental and safety laws. Inspections may include, but are not limited to: reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in BMPs; evaluating the condition of BMPs and other storm water management practices

b) Right-of-Entry for Inspection. When any new BMP is installed on private property, the property owner shall grant to the Storm Water Administrator the right to enter the property at reasonable times and in a reasonable manner for the purpose of inspection. This includes the

right to enter a property when the Storm Water Administrator has a reasonable basis to believe that a violation of this ordinance is occurring or has occurred, and to enter when necessary for abatement of a public nuisance or correction of a violation of this ordinance. The Storm Water Administrator shall take reasonable steps to inform the responsible party prior to inspecting the property.

.25 Enforcement and Violations.

a) General

(1) Authority to Enforce. The provisions of this ordinance shall be enforced by the Storm Water Administrator, his or her designee, or any authorized agent of the Town Huntersville.

(2) Violation Unlawful. Any failure to comply with an applicable requirement, prohibition, standard, or limitation imposed by this ordinance, or the terms or conditions of any permit or other development or redevelopment approval or authorization granted pursuant to this ordinance, is unlawful and shall constitute a violation of this ordinance

(3) Each Day a Separate Offense. Each day that a violation continues shall constitute a separate and distinct violation or offense.

(4) Responsible Persons/Entities. For the purposes of this ordinance, responsible person(s) shall include but not be limited to:

(a) Person Maintaining Condition Resulting In or Constituting Violation. An architect, engineer, builder, contractor, developer, agency, property owners' association or any other person who participates in, assists, directs, creates, causes, or maintains a condition that constitutes a violation of this ordinance, or fails to take appropriate action, so that a violation of this ordinance results or persists

(b) Responsibility For Land or Use of Land. The owner of the land on which the violation occurs, any tenant or occupant of the property, any person who is responsible for storm water controls or practices pursuant to a private agreement or public document, or any person, who has control over, or responsibility for, the use, development or redevelopment of the property.

b) Remedies and Penalties. The remedies and penalties provided for violations of this ordinance, whether civil or criminal, shall be cumulative and in addition to any other remedy provided by law, and may be exercised in any order.

(1) Remedies

(a) Withholding of Certificate of Occupancy. The Storm Water Administrator or other authorized agent may refuse to issue a certificate of occupancy for the building or other improvements constructed or being constructed on the site and served by the storm water practices in question until the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise cured the violations described therein.

(b) Disapproval of Subsequent Permits and Development Approvals. As long as a violation of this ordinance continues and remains uncorrected, the Storm Water Administrator or other authorized agent may withhold and the Town of Huntersville may disapprove, any request for permit or development approval or authorization provided for by this ordinance or the zoning, subdivision, and/or building regulations for the land on which the violation occurs

(c) Injunction, Abatements, etc. The Town of Huntersville may institute an action in a court of competent jurisdiction for a mandatory or prohibitory injunction and order of abatement to correct a violation of this ordinance. Any person violating this ordinance shall be subject to the full range of equitable remedies provided in the General Statutes or at common law.

(d) Correction as Public Health Nuisance, Costs as Lien, etc. If the violation is deemed dangerous or prejudicial to the public health or public safety, the Town of Huntersville may cause the violation to be corrected and the costs to be assessed as a lien against the property.

(e) Stop Work Order. The Storm Water Administrator may issue a stop work order to the person(s) violating this ordinance. The stop work order shall remain in effect until the person has taken the remedial measures set forth in the notice of violation or has otherwise corrected the violation or violations described therein. The stop work order may be withdrawn or modified to enable the person to take the necessary remedial measures to correct such violation(s).

(2) Civil Penalties. Violation of this ordinance may subject the violator to a civil penalty up to the full amount of penalty to which the Town of Huntersville is subject for violations of its Phase II Storm Water Permit. If the violator does not pay the penalty within 30 days after notice of the violation is issued by the Storm Water Administrator, the violation shall be recovered in a civil action in the nature of a debt.

(3) Criminal Penalties Violation of this ordinance may be enforced as a misdemeanor subject to the maximum fine permissible under North Carolina law.

#### c) Procedures

(1) Initiation/Complaint. Whenever a violation of this ordinance occurs, or is alleged to have occurred, any person may file a written complaint. Such complaint shall state fully the alleged violation and the basis thereof, and shall be filed with the Storm Water Administrator, who shall record the complaint. The complaint shall be investigated promptly by the Storm Water Administrator.

(2) Inspection. The Storm Water Administrator shall have the authority, upon presentation of proper credentials, to enter and inspect any land, building, structure, or premises to ensure compliance with this ordinance.

(3) Notice of Violation and Order to Correct. When the Storm Water Administrator finds that any building, structure, or land is in violation of this ordinance, the Storm Water Administrator shall notify, in writing, the property owner or other person violating this ordinance. The notification shall indicate the nature of the violation, contain the address or other description of the site upon which the violation is occurring, order the necessary action to abate the violation, and give a deadline for correcting the

violation. If civil penalties are to be assessed, the notice of violation shall also contain a statement of the civil penalties to be assessed, the time of their accrual, and the time within which they must be paid or be subject to collection as a debt.

The Storm Water Administrator may deliver the notice of violation and correction order personally, by certified or registered mail, return receipt requested, or by any means authorized for the service of documents by Rule 4 of the North Carolina Rules of Civil Procedure. If a violation is not corrected within a reasonable period of time, as provided in the notification, the Storm Water Administrator may take appropriate action under this ordinance to correct and abate the violation and to ensure compliance with this ordinance.

(4) Emergency Enforcement. If delay in correcting a violation would seriously threaten the effective enforcement of this ordinance or pose an immediate danger to the public health, safety, or welfare, then the Storm Water Administrator may order the immediate cessation of a violation. Any person so ordered shall cease any violation immediately. The Storm Water Administrator may seek immediate enforcement, without prior written notice, through any remedy or penalty authorized by this ordinance.

## **8.25 S.W.I.M. (Surface Water Improvement and Management) Stream Buffers**

.1 Purpose. The purpose of a stream buffer network is to filter pollutants, store floodwaters, provide habitat, and contribute to the “green infrastructure”. Stream systems are comprised of each stream and its respective drainage basin.

- Streams have the primary natural functions of conveying storm and ground water, storing floodwater, and supporting aquatic life.
- Vegetated lands adjacent to the stream channel in the drainage basin serve as “buffers” to protect the stream’s ability to fulfill its natural functions. Buffers have the primary natural functions of protecting water quality by filtering pollutants, providing intermittent storage for floodwaters, allowing channels to meander naturally, and providing suitable habitat for wildlife.

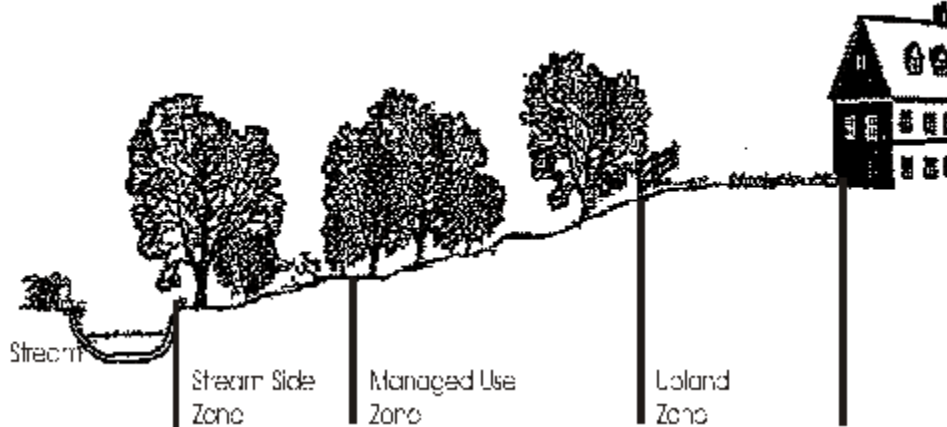
.2 Definitions. For the purposes of this section, the following words and phrases shall be defined as specified below:

Best Management Practices (BMP's). A structural or nonstructural management based practice used singularly or in combination to reduce non-point source input to receiving waters in order to achieve water quality protection goals.

Buffer. A vegetated area through which storm water runoff flows in a diffuse manner so that the runoff does not become channelized and which provides for infiltration of the runoff and filtering of pollutants.

Buffer Zones. Buffer widths are measured in three (3) zones as shown below. The buffer width is measured horizontally and must be surveyed by a licensed land surveyor on a line parallel to the surface water, landward from the top of the bank on each side of the stream.

### Three Zoned Urban Stream Buffer



Drainage Basin. The area of land that drains to a given point on a body of water.

Floodway. The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than the allowable surcharge (currently one foot).

Flood Fringe. The land area located between the limits of the floodway and the maximum elevation subject to inundation by the base (1% chance) flood.

Floodplain. The low, periodically flooded lands adjacent to rivers and lakes. For land use planning purposes, the regulatory floodplain is usually viewed as all land alongside a watercourse that would be inundated by the base (1% chance) flood; the floodway plus the flood fringe.

Mitigation. Actions taken on-site and/or off-site to offset the effects of temporary or permanent loss of a buffer.

Top of Bank. The landward edge of the stream channel during high water, bankfull conditions at the point where water begins to overflow onto the floodplain.

.3 Applicability.

a) All properties shall comply with the buffer requirements of this Section except those which, as of the effective date of October 19, 1999, have previously secured a right to proceed by one of the following methods, and have received written authorization to disturb the buffer from the Town's Planning Staff:

- Having been issued a Certificate of Building Code Compliance;
- Being subject to an approved major subdivision preliminary plan and/or recorded final plat;
- Being subject to a minor subdivision plat, exempt plat listed under the definition of subdivision in the Subdivision Ordinance, or described by metes and bounds in a recorded deed which:
  - If to be used for residential purposes, are one (1) acre or less in size.

- If to be used for nonresidential purposes or mixed use purposes, are four (4) acres or less in size if located on a non-FEMA regulated floodway, or are seven (7) acres or less in size if located on a FEMA regulated floodway.
- Being subject to a site specific development plan defined under [Section 2.2.2](#) of these zoning regulations; or
- Having otherwise secured a vested property right under state law.

b) Redevelopment or expansion of uses and structures included in a), above, shall comply with the buffer requirements of this Section, however uses and structures previously approved and constructed in a buffer may remain.

c) A site specific development plan amended by action of the Board of Commissioners subsequent to adoption of this Section shall comply, in its amended form, with the S.W.I.M. buffer requirements, however uses and structures previously approved for construction in a buffer may remain.

d) Where stream buffers are also required as part of the Lake Norman or Mountain Island Lake Watershed Overlay Districts, the more stringent of the stream buffer requirements shall apply.

#### 4 Buffer Delineation.

S.W.I.M. Stream Buffers, throughout the jurisdiction of the Town of Huntersville shall be delineated by Mecklenburg County through its geographic information system (GIS) using the most current digital elevation model (DEM) of no greater than 10-foot cells. This stream buffer delineation including buffer widths shall be periodically updated as new data becomes available. The most recent delineation shall be provided for public use through Mecklenburg County's website.

#### .5 Minimum Buffer Widths.

All perennial and intermittent streams draining less than 50 acres shall have a minimum 30-foot vegetated buffer including a 10-foot zone adjacent to the bank. Disturbance of the buffer is allowed; however, any disturbed area must be re-vegetated and disturbance of the 10-foot zone adjacent to the bank shall require stream bank stabilization using bioengineering techniques as specified in the Design Manual. All perennial and intermittent streams draining greater than or equal to 50 acres and less than 300 acres shall have a 35-foot buffer with two (2) zones, including a 20-foot stream side and 15-foot upland zone. Streams draining greater than or equal to 300 acres and less than 640 acres shall have a 50-foot buffer with three (3) zones, including a 20-foot stream side, 20-foot managed use and 10-foot upland zone. Buffers for streams draining greater than or equal to 640 acres shall be 100 feet in width or include the entire floodplain, whichever is greater. This buffer shall consist of a 30-foot stream side, 45-foot managed use and 25-foot upland zone or the entire FEMA floodplain, whichever is greater. All buffers shall be measured from the top of the bank on both sides of the stream. A summary of minimum buffer widths is provided in the table below.

Table of Minimum Buffer Widths by Basin Size and Buffer Zone

Area Designation	Stream Side Zone	Managed Use Zone	Upland Zone	Total Buffer Width each side of Stream	Notes
<50 acres	N/A	N/A	30 feet	30 feet	[1,2]
>50 acres	20 feet	None	15 feet	35 feet	[2]
>300 acres	20 feet	20 feet	10 feet	50 feet	[2]

Area Designation	Stream Side Zone	Managed Use Zone	Upland Zone	Total Buffer Width each side of Stream	Notes
>640 acres	30 feet	45 feet	25 feet or balance of floodplain, whichever is greater	100 feet or entire floodplain, whichever is greater	[2,3]

Notes:

[1] All perennial and intermittent streams draining less than 50 acres shall have a minimum 30-foot vegetated buffer including a 10-foot zone adjacent to the bank. Disturbance of the buffer is allowed; however, any disturbed area must be re-vegetated and disturbance of the 10-foot zone adjacent to the bank shall require stream bank stabilization using bioengineering techniques as specified in the Design Manual.

[2] Buffer widths are surveyed horizontally on a line parallel to the surface water, landward from the top of the bank on each side of the stream.

[3] Floodplain and buffer calculations will be based upon the FEMA flood fringe and floodway encroachment lines, as locally adopted and as may be amended from time to time.

.6 Buffer Description.

Buffer function, vegetation and use vary according to the different buffer zones and are described in the following table.

**Table of Buffer Treatment by Buffer Zone**

	Stream Side Zone	Managed Use Zone	Upland Zone	Notes
<b>Function</b>	Protect the integrity of the ecosystems	Provide natural filter; provide distance between upland development and the stream side zone	Prevent encroachment and filter runoff	
<b>Vegetative Requirements</b>	<b>Undisturbed (no cutting, clearing or grading).</b> If existing tree density is inadequate, reforestation is required.	<b>Limited clearing (no grading).</b> Existing tree density must be retained to a minimum of 8 healthy trees of a minimum 6 inch caliper per 1000 square feet. If existing tree density is inadequate,	<b>Herbaceous ground cover,</b> including grass, is allowed; maintenance of existing forest or reforestation is encouraged.	(1)



		reforestation is encouraged.		
<b>Uses</b>	<b>Very restricted.</b> Permitted uses limited to flood control structures and bank stabilization (where permitted) as well as installation of parallel or near perpendicular (greater than or equal to 75 degrees) water and sewer utilities and near perpendicular road crossings (greater than or equal to 75 degrees) with stabilization of disturbed areas as specified in Section 8.25.10.	<b>Restricted.</b> Permitted uses limited to those allowed in the Stream Side Zone, as well as bike paths and greenway trails up to 10 feet in width.	<b>Restricted.</b> Permitted uses limited to those allowed in Stream Side and Managed Use Zones, as well as gasebos, non-commercial storage buildings less than 150 square feet, limited grading that does not change the functionality or extent of the floodplain, and storm water structural best management practices (BMPs) if approved in accordance with Section 8.25.11 b), as a condition of a buffer width variance.	(2), (3), (4)

**Note:**

(1) When reforestation of disturbed buffers is required, tree planting shall be as specified in the Charlotte Mecklenburg SWIM Stream Buffer Implementation Guidelines.

(2) Fill material cannot be brought into any required buffer. In the Upland Zone only, limited grading that does not change the extent or functional characteristics of the floodplain is permitted. Uses permitted in the buffer zones should be coordinated to ensure minimal disturbance of the buffer system. For example, if it is necessary to install utilities within the buffer, then if Greenway Trails are built they should follow these cleared areas instead of necessitating additional clearing.

(3) Notwithstanding the uses and structures permitted in the "Upland Zone", the stricter standards of floodway regulations, if applicable, shall apply.

(4) Greenway Trails referenced in this table refer exclusively to those approved by and dedicated to the Town of Huntersville or Mecklenburg County Parks and Recreation Departments. Other paths or trails in the buffer shall be in accordance with the Charlotte-Mecklenburg SWIM Stream Buffer Implementation Guidelines.

.7 Diffuse Flow Requirement. Diffuse flow of runoff shall be maintained in the buffer by dispersing concentrated flow through the use of level spreaders or other such devices to create sheet flow and by reestablishing vegetation. Techniques for providing diffuse flow are specified in the Charlotte-Mecklenburg BMP Design Manual.

- Maximum drainage area size shall be no greater than 10 acres for all outfalls discharging directly into a stream buffer.
- When practical, a drop structure should be installed prior to the last section of outfall pipe discharging to a buffer. A short length of outfall pipe should be laid flat (0% Slope Energy Dissipater), prior to the riprap apron or other energy dissipater.
- Concentrated runoff from ditches or other manmade conveyances shall be diverted to diffuse flow before the runoff enters the buffer.
- Periodic corrective action to restore diffuse flow shall be taken by the property owner as necessary to impede the formation of erosion gullies.

.8 Ponds that intersect the stream channel shall have the same buffers as the original stream. Buffer requirements do not apply to wet ponds used as structural BMP's.

.9 Buffer Delineation. The following buffer delineations are required:

a) Buffer boundaries including all buffer zones must be clearly delineated on all site-specific plans for Board of Commissioner approval, on all construction plans, including grading and clearing plans, erosion and sediment control plans, and site plans.

b) The surveyed outside buffer boundary, including all buffer zones, must be clearly marked on-site with orange "tree-protection" or "high-hazard" fence prior to any land disturbing activities. Tree protection is required by [Section 7.4\(3\)](#) of this Ordinance. Where existing trees are to be preserved in a buffer zone, the limits of grading shall equal the drip line of those trees plus an additional five (5) feet on the upland side of the buffer. All Specimen and Heritage trees require a tree survey prior to land-disturbing activity and shall be saved in all buffer zones.

c) The surveyed outside boundary of the buffer must be permanently marked with an iron pin at the intersection of the watershed buffer and each property line on each parcel following the completion of land disturbing activities and prior to occupancy. Properties greater than 200' in width shall be marked at a maximum of 100' intervals.

d) Separate buffer zones must be permanently marked at highway stream crossings.

e) Buffer boundaries including all buffer zones as well as all buffer requirements must be specified on the record plat, on individual deeds, and in property association documents for lands held in common.

.10 Buffer Impacts Permitted under [Section 8.25](#), S.W.I.M. The following buffer impacts are permitted, but design and construction shall comply with the specifications provided in the Charlotte-

Mecklenburg Buffer Implementation Guidelines for stabilization of disturbed areas to minimize negative effects on the quality of surface waters.

- Near perpendicular (75° or greater) road crossings for connectivity or transportation links where the Town of Huntersville has granted site plan approval.
- Near perpendicular (75° or greater) utility crossings as approved by Charlotte-Mecklenburg Utilities.
- Parallel water and sewer utility installation as approved by Charlotte-Mecklenburg Utilities, where a logical and appropriate basis for the impact is demonstrated, where disturbance of the Stream Side Zone is minimized to the maximum extent practicable, and where guidelines for restoring vegetation within buffers disturbed as a result of parallel utility installation are met. These guidelines are specified in the Charlotte-Mecklenburg Buffer Implementation Guidelines.
- Public paths and trails parallel to the creek outside the Stream side Zone and near perpendicular stream crossings in any zone. Pathways must use existing and proposed utility alignments or previously cleared areas and minimize tree cutting to the maximum extent practicable. To the extent possible, pathways shall preserve existing drainage patterns and avoid drainage structures that concentrate storm water.
- Incidental drainage improvements/repairs for maintenance.
- Individual pedestrian paths connecting homeowners to the stream in the form of narrow, pervious footpaths with minimal tree disturbance.
- New domesticated animal trails (farming) where existing trails are lost as a result of action beyond the farmer's control. Stream crossings should be constructed to minimize impacts to the Stream Side Zone and be maintained with fencing perpendicular to and through the buffer to direct animal movement.
- Mitigation approved by a state or federal agency acting pursuant to Sections 401 or 404 of the federal Clean Water Act.

#### .11 Appeals and Variances.

a) An appeal to reverse or modify the order, decision, determination, or interpretation of the Zoning Administrator shall comply with the procedures and standards of Section 11.3 of these ordinances.

b) Special Variance Provisions/Mitigation Techniques.

- When “unnecessary hardships”, as defined in Section 11.3.2 f, would result from strict adherence to the buffer width requirements and/or buffer treatment standards, a petition for variance may be filed with the Huntersville Board of Adjustment in compliance with the procedures and standards of Section 11.3.
- Site specific mitigation plans using the mitigation techniques set out below and approved by the designated agency shall be construed by the Board of Adjustment to be evidence responsive to Section 11.3.2 e), subparagraph 4 – consistency with adopted plans and protection of public safety and welfare. Specifications for these mitigation techniques are provided in the Charlotte-Mecklenburg Buffer Implementation Guidelines (for Structural BMPs). The techniques below are not construed to offset the requirement of Section 8.25.6 for diffuse flow.

(1) Installation of Structural BMPs. The installation of an on-site structural BMP designed to achieve specified pollutant removal targets will allow for all proposed stream buffer impact on the specific site. The BMP must remain outside of the Stream Side Zone and Manage Use Zone. A detailed BMP design plan must be

submitted to the Mecklenburg County Land Use and Environmental Services Agency for approval based on specifications contained in the Charlotte-Mecklenburg BMP Design Manual. This plan must also include a long-term maintenance strategy for the BMP, complete with the establishment of adequate financing to support the proposed maintenance practices.

(2) Stream Restoration. The owner may restore and preserve the buffer area on any stream of equivalent or greater drainage area the condition of which is determined to be qualified for restoration by the Mecklenburg County Land Use and Environmental Services Agency on a 1:1 basis in linear feet of stream. This restoration shall include stream bank improvements and Stream Side and Managed Use Zone re-vegetation, in accordance with the Charlotte-Mecklenburg Buffer Implementation Guidelines, and receive approval from the Mecklenburg County Land Use and Environmental Services Agency.

(3) Stream Preservation. The owner may purchase, fee simple, other stream segments at equivalent or greater drainage area on a 1:1 linear foot basis and convey fee simple and absolute title to the land to the Town of Huntersville, Mecklenburg County, or conservation trust, with a plan approved by the Mecklenburg County Land Use and Environmental Services.

(4) Wetlands Restoration. On a 2:1 acreage basis for disturbed stream and buffer area (2 acres of wetland for each acre of disturbed area), the owner may provide a combination of the preservation and/or restoration of wetlands with protective easements and the implementation of structural or non-structural BMPs to achieve specific pollutant removal targets within the impacted area. Restoration plan must be approved by the Mecklenburg County Land Use and Environmental Services.

(5) Bottom Land Hardwood Preservation. On a 2:1 acreage basis for impacted stream and buffer area (2 acres of bottomland hardwood for each acre of disturbed area), the owner may provide a combination of the preservation of existing bottom land hardwood forest or other specifically approved natural heritage area by conservation easement or other legal instrument, and the implementation of structural or non-structural BMPs to achieve specific pollutant removal targets within the impacted area. Plan to be approved by Mecklenburg County Land Use and Environmental Services Agency.

(6) Controlled Impervious Cover for Disturbance Landward of Stream Side Zone. The owner may commit to, and provide, a specific site development plan for the parcel with requested buffer disturbance. The plan shall limit overall site impervious cover to less than or equal to 24%. Preservation of the Stream Side Zone is still required. Plan to be approved by Mecklenburg County Land Use and Environmental Services Agency.

(7) Open Space Development. The submission of a site-specific development plan that preserves 50% of the total land area as undisturbed open space. Plan to be approved by Mecklenburg County Land Use and Environmental Services Agency.

(8) Mitigation Credits: The purchase of mitigation credits through the Stream Restoration Program on a 1:1 basis, utilizing linear feet of stream impacted and

the prevailing rate of purchase as established by the Charlotte-Mecklenburg Buffer Implementation Guidelines. Mitigation credits purchased under any other program (i.e., U.S. Army Corp of Engineers) shall not cover this requirement unless the issuing agency agrees to relinquish the funds to the appropriate local government agency.

(9) Alternative mitigation. The list of mitigation techniques shall not prevent the creative development of alternative mitigation plans that achieve the purposes of this section.

.12 Posting of financial security required. When structural BMPs (wet detention ponds and other BMPs) are approved for mitigation of a buffer disturbance, the approval will be subject to the owner filing a surety bond or letter of credit or making other financial arrangements which are acceptable to the Mecklenburg County Land Use and Environmental Services Agency, in a form which is satisfactory to the County Attorney, guaranteeing the installation and maintenance of the required structural BMPs until the issuance of certificates of occupancy for seventy-five percent (75%) of all construction which might reasonably be anticipated to be built within the area which drains into the BMPs, allowing credit for improvements completed prior to the submission of the final plat. At such time that this level of occupancy is achieved, written notice thereof must be submitted by the owner to the Mecklenburg County Land Use and Environmental Services Agency. The owner must also verify the adequacy of the maintenance plan for the BMPs including the necessary financing to support the proposed maintenance practices. The Mecklenburg County Land Use and Environmental Services Agency will inspect the structural BMPs and verify the effectiveness of the maintenance plan; if both are found to be satisfactory, the department will notify the owner in writing within 30 days of the date of notice.

.13 Maintenance responsibilities for structural BMP's – Civil Penalties.

Maintenance of all structural BMP's will be the responsibility of the property owner or his designee. Any person who fails to maintain the required BMP's in accordance with the approved maintenance plan will be subject to a civil penalty of not more than \$5,000. Each day that the violation continues shall constitute a separate violation. No penalties shall be assessed until the person alleged to be in violation has been notified in writing of the violation by registered or certified mail, return receipt requested, or by other means which are reasonably calculated to give actual notice. The notice shall describe the nature of the violation with reasonable particularity, specify a reasonable time period within which the violation must be corrected, and warn that failure to correct the violation within the time period will result in assessment of a civil penalty or other enforcement action.

.14 Request for Determination of Buffer Requirements

When a landowner or other affected party believes that the S.W.I.M stream buffer delineation maps described in [Section 8.25.4](#) inaccurately depict buffer requirements, he or she shall request a determination from the Storm Water Administrator. Such determinations shall be made by the Storm Water Administrator based on an on-site evaluation using the U.S. Army Corps of Engineers and N.C. Division of Water Quality methodology for stream delineation as well as information from databases maintained for stream delineation by Mecklenburg County. Such determinations can also be made at the discretion of the Storm Water Administrator in the absence of a request from a landowner or other concerned party. The buffer requirements of this ordinance shall apply based on determinations made by the Storm Water Administrator. Surface waters that appear on the maps

shall not be subject to this ordinance if an on-site determination by the Storm Water Administrator shows that they fall into one of the following categories.

- (1) Ditches and manmade conveyances other than modified natural streams.
- (2) Manmade ponds and lakes that are not intersected by a buffered stream segment and that are located outside natural drainage ways.
- (3) Ephemeral (storm water) streams.